

ENTRY OF AMENDMENT UNDER 37 C.F.R. § 1.116

Applicants request entry of this Rule 116 Response because Applicants should be given an opportunity to respond to the newly cited reference of U.S. Patent 5,442,377 to Rowe, the amendments of claims 1-17 and new claims 20-21 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised; and the amendments and new claims do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

DRAWING ACKNOWLEDGEMENT

No indication of the status of the drawings is provided in item 10 of the Office Action Summary. Please acknowledge the acceptability of the Drawings (FIGS. 1-2, 3A-3B, 4A-4D, 5, 6A-6D, 7-9, 10A-10D, 11-12, 13A-13C and 14-17) in the next Office Action.

REJECTION UNDER 35 USC §102(b) and 35 USC §103(a)

On pages 2-3 of the Office Action, numbered paragraph 3, claims 1, 4-8, 10 and 13-17 were rejected under 35 U.S.C. §102(b) as being anticipated by the newly-cited reference of Rowe (US Patent No. 5,442,377).

On pages 3-6 of the Office Action, numbered paragraph 5, claims 2, 3, 9, 11, 12, 18 and 19 were rejected under 35 U.S.C. §102(b) as being unpatentable over newly-cited Rowe in view of Siddiqui (US Patent No. 5,912,661).

Reconsideration of these rejections is respectfully requested. The previous amendments to the claims were not substantial and therefore, the Rowe reference should have been cited by the Examiner for consideration and response by Applicants earlier.

An object of the present invention "is to provide a coordinate input device having a switch for switching between a first operation method for moving around a mouse and a second operation method in which a result similar to that obtained with the first operation method can be obtained without moving the mouse around." (See the present specification at page 2, lines 21-27.)

Accordingly, the present invention as recited in claim 1 provides a "coordinate input device ... comprising ... rotating bodies ...; a format change-over switch; and data transmission means." The rotating bodies are capable of rotating about a frame on each side of a wheel. Further the present invention as recited in claim 1 includes at least the distinguishing features of the "data transmission means transmitting information detected by the detection means as a set of operation instructions for a computer and adapted to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed." In accordance with the present invention of claim 1, the operation of a cursor by moving the coordinate input device (mouse) is simplified when the coordinate input device is restricted to a small area through use of the format change-over switch which enables switching of the data output formats for transmitting data to the host.

Furthermore, as described for a preferred embodiment of the present invention, since rotation of the wheel and the rotating bodies thereon in a mouse are perpendicular to each other, rotation of the wheel and rotating bodies can be allocated, for example, as the scroll function to scroll through application software on the screen. (See the present specification at page 14, lines 22-29).

Newly-cited Rowe discloses a device "to provide a multi-axis cursor or pointer control device which operates from a fixed location thereby avoiding the need to move the control device location to effect signal generation." (See Rowe at column 2 line 66 to column 3, line 2.) Rowe does not disclose or suggest anything related to a coordinate input device, which has a switch "to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in second format when said format change-over switch is depressed" (see claim 1). Thus, Rowe is silent about a coordinate input device with a first operation method for moving around a mouse and a second operation method having similar results as the first operation method without moving the mouse around.

Siddiqui discloses "a computer input device with a ... wheel button type z-encoder mechanism. The wheel button is supported on an axle or spindle within the housing of the input device. The axle is supported in the housing by spaced-apart axle supports." (See Siddiqui at column 2, lines 3-8.) Further Siddiqui merely discloses, for example, microswitches 52, 54 and 56, but is silent about their functions other than disclosing that the microswitch 52 is desirably designed to provide tactile and optionally aural feedback. Siddiqui, similar to Rowe, does not disclose or suggest anything related to a coordinate input device, which has a switch "to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed" (see claim 1). Thus, Siddiqui is also silent about a coordinate input device with a first operation method for moving around a mouse and a second operation method having similar results as the first operation method without moving the mouse around.

By contrast, the present invention of claim 1 as above-mentioned, recites at least the distinguishing features of "data transmission means transmitting information detected by the detection means as a set of operation instructions for a computer and adapted to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed" which enables, for example, switching between a first operation method for moving around a mouse and a second operation method having similar results as the first operation method without moving the mouse around.

Further, notwithstanding that there were no suggestions in the cited art with regard to the above mentioned distinguishing features, it is submitted that a combination of the cited prior art to create the present invention would be beyond one of ordinary skill in the art.

Accordingly, it is submitted that claim 1 patentably distinguishes over the prior art and should be allowable. Claims 9, 10 and 21, which include at least similar features as claim 1, are also allowable for at least similar reasons as claim 1, as well as for the additional features recited therein. Claims 2-8, 11-17 and 20, which depend directly or indirectly from claims 1 and 10, are also allowable for at least the same reasons as claims 1 and 10, as well as for the additional features recited therein. Reconsideration is respectfully requested

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that affect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 13 JUNE 2002

By: James T. Strom
James T. Strom
Registration No. 48,702

700 Eleventh Street, NW, Suite 500
Washington, D.C. 20001
(202) 434-1500

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 18 and 19 are cancelled, claims 1-17 are amended and claims 20-21 are added.

1. (ONCE AMENDED) A coordinate input device having a wheel that can be operated through rotation, comprising:
a plurality of rotating bodies disposed along a circumferential edge of said wheel, and rotatable on said circumferential edge as an axis of rotation; [and]
rotating body rotating state detection means for detecting [the] a rotating state of said rotating bodies;
a format change-over switch; and
data transmission means for transmitting information detected by the detection means as a set of operation instructions for a computer and adapted to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed.

2. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim 1, wherein said coordinate input device has a left click switch as a first switch and a right click switch as a second switch, said coordinate input device further comprising:
a third switch disposed as a lower portion of said wheel,
a wheel support portion having a construction to support [for supporting] said wheel and [allowing] to allow said wheel to slide and adapted to drive said third switch by depressing said wheel downwardly; and
third switch operating state detection means for detecting the operating state of said third switch.

3. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim 2,
wherein said wheel support portion further comprises a ratchet construction on [the] a side of said wheel, and wherein
said wheel is adapted to fit in said ratchet construction.

4. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim

1, wherein

an inner wall at a center of said respective rotating bodies through which said circumferential edge is put has a locking construction, and wherein
said circumferential edge is adapted to fit in [said] a second locking construction.

5. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim 1, wherein said rotating body is of a cylindrical configuration.

6. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim 1, wherein said rotating body is of a spherical configuration.

7. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim 1, wherein a surface of said rotating bodies is covered with a slip preventive material.

8. (ONCE AMENDED) [A] The coordinate input device as set forth in [Claim] claim 1, wherein a recess is formed in [the] a surface of said rotating bodies.

9. (ONCE AMENDED) A coordinate input device [as set forth in Claim 1, wherein said coordinate input device further comprises] having a wheel that can be operated through rotation, comprising:

a plurality of rotating bodies disposed along a circumferential edge of said wheel and rotatable on said circumferential edge as an axis of rotation;

a rotating body rotating state detection unit detecting a rotating state of said rotating bodies;

ball moving state detection means for detecting [the] a moving state of a ball;

click switch operating state detection means for detecting [the] an operating state of a click switch; [and

[wheel rotating state detection means for detecting the rotating state of said wheel, said coordinate input device further comprising:]

a format change-over switch; and

data transmission means for transmitting respective pieces of information detected by said respective detection means as a set of operation instructions for a computer and adapted

to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed.

10. (ONCE AMENDED) A coordinate input device having a wheel that can be operated through rotation, comprising:

a plurality of rotating bodies disposed along a circumferential edge of said wheel and rotatable on said circumferential edge as an axis of rotation; [and]

a rotating body rotating state detection unit detecting [the] a rotating state of said rotating bodies;

a format change-over switch; and

a data transmission unit transmitting information detected by each of said respective detection unit as a set of operation instructions for a computer and adapted to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed.

11. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 10, wherein said coordinate input device has a left click switch as a first switch and a right click switch as a second switch, said coordinate input device further comprising:

a third switch disposed as a lower portion of said wheel;

a wheel support portion to support said wheel and to allow said wheel to slide and adapted to drive said third switch by depressing said wheel downwardly; and

a third switch operating state detection unit detecting the operating state of said third switch.

12. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 11, wherein said wheel support portion further comprises a ratchet construction on a side of said wheel, and wherein said wheel is adapted to fit in said ratchet construction.

13. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 10, wherein an inner wall at a center of said respective rotating bodies through which said circumferential edge is put has a locking construction, and wherein said circumferential edge is

adapted to fit in [said] a second locking construction.

14. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 10, wherein said rotating body is of a cylindrical configuration.

15. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 10, wherein said rotating body is of a spherical configuration.

16. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 10, wherein a surface of said rotating bodies is covered with a slip preventive material.

17. (ONCE AMENDED) [A] The coordinate input device as set forth in claim 10, wherein a recess is formed in a surface of said rotating bodies.

Please ADD the following new claims:

20. (NEW) The coordinate input device as set forth in claim 1, wherein said coordinate input device further comprises:

ball moving state detection means for detecting a moving state of a ball;

click switch operating state detection means for detecting an operating state of a click switch; and

wheel rotating state detection means for detecting a rotating state of said wheel, where the data transmission means also transmits information detected by the rotating state detection means.

21. (NEW) A coordinate input device having a wheel that can be operated through rotation, comprising:

a plurality of rotating bodies disposed along a circumferential edge of said wheel, and being rotatable on said circumferential edge as an axis of rotation;

rotating body rotating state detection means for detecting a rotating state of said rotating bodies;

ball moving state detection means for detecting a moving state of a ball;

click switch operating state detection means for detecting an operating state of a click

switch;

wheel rotating state detection means for detecting a rotating state of said wheel;

a format change-over switch; and

data transmission means for transmitting respective pieces of information detected by said respective detection means as a set of operation instruction for a computer and adapted to effect transmission in a first format when said format change-over switch is not depressed and to effect another transmission in a second format when said format change-over switch is depressed.